

**IN THE CLAIMS:**

1.-26. (Cancelled)

27. (Withdrawn) The method according to claim 50, wherein, when the biological material contains the aforementioned cellular components (b) said graft is an *in vitro* cartilage tissue to be surgically implanted *in vivo* inside the joint capsule in which one of said degenerative pathologies has been established with consequent degradation of the extracellular cartilage matrix.

28. (Withdrawn) The method according to claim 50 wherein *in vitro* cartilage tissue further comprises the extracellular matrix produced by said chondrocytes or mesenchymal cells partially or completely differentiated towards chondrocytes said extracellular matrix being both inside said *in vitro* cartilage tissue and once *in vivo* implanted also inside the joint cartilage affected by one of said degenerative pathologies.

29. (Withdrawn) The method according to claim 50 wherein said graft is surgically implantable at the beginning of the process of degradation of the molecules that make up the extracellular matrix of the cartilage.

30. (Withdrawn) The method according to claim 50, wherein said graft is surgically implantable in the later stages of said pathology too, when moderately and/or badly damaged areas of cartilage can be seen.

31. (Withdrawn) The method according to claim 50 wherein the average molecular weight of hyaluronic acid in the hyaluronic acid derivative range between  $1 \times 10^5$ Da and  $1 \times 10^6$ Da.

32. (Withdrawn) The method according to claim 50, wherein the average molecular weight of hyaluronic acid range between 200,000 and 750,000 Da.

33. (Withdrawn) The method according to claim 50 wherein the hyaluronic acid derivative is selected from the class consisting of:

A) HA salified with organic and/or inorganic bases,

- B) HA esters with alcohols of the aliphatic, araliphatic, cycloaliphatic, aromatic, cyclic and heterocyclic series,
- C) HA amides with amine of the aliphatic, araliphatic, cycloaliphatic, aromatic, cyclic and heterocyclic series.
- D) O-sulphated derivatives of HA,
- E) inner esters of HA with a percentage of esterification that does not exceed 20%,
- F) Deacetylated derivatives of HA obtained by the deacetylation of the N-acetyl-glucosamine fraction,
- G) percarboxylated derivatives of HA obtained by oxidising the primary hydroxyl of the N-acetyl-glucosamine fraction with a degree of percarboxylation ranging between 0.1 and 100%.

34. (Withdrawn) The method according to claim 33, wherein the HA derivative belongs to class(A) it is obtained by treating hyaluronic acid with sodium hydroxide.

35. (Withdrawn) The method according to claim 33, wherein, when the HA derivative belongs to class (B) it has a percentage of esterification ranging from 50 to 100%, and the remaining percentage of unesterified HA is salified with organic or inorganic base.

36. (Withdrawn) The method according to claim 35, wherein said base is sodium hydroxide.

37. (Withdrawn) The method according to claim 33, wherein when the HA derivative belongs to class (C) it has a percentage of amidation ranging between 0.1 and 50% and the remaining portion is salified with organic and/or inorganic bases.

38. (Withdrawn) The method according to claim 37 wherein said base is sodium hydroxide.

39. (Withdrawn) The method according to claim 33, wherein when the HA derivative belongs to class (D) it has from 1 to 4 -OSO<sub>3</sub>H group per saccharide unit.

40. (Withdrawn) The method according to claim 33 wherein when the HA derivative belongs to class (E) it has a degree of esterification ranging from 0.05 to 10%, and the remaining percentage of non-esterified HA may be salified with organic and/or inorganic bases.

41. (Withdrawn) The method according to claim 40, wherein said base is sodium hydroxide.

42. (Withdrawn) The method according to claim 33, wherein when the HA derivative belongs to class (F) it has a percentage of deacetylation ranging between 0.1 and 30% and all the carboxy groups of HA are salified with organic and/or inorganic bases.

43. (Withdrawn) The method according to claim 42, wherein said base is sodium hydroxide.

44. (Withdrawn) The method according to claim 33, wherein, when the HA derivative belongs to class (G), it has a degree of percarboxylation ranging from 25 to 75% and all the carboxy groups are salified with organic and/or inorganic bases.

45. (Withdrawn) The method according to claim 44, wherein the base is sodium hydroxide.

46. (Withdrawn) The method according to claim 50, wherein said three-dimensional matrix is in a form selected from the group consisting of: a non-woven tissue, a tissue, microspheres, and a sponge.

47. (Withdrawn) The method according to claim 50, wherein said HA derivative is a hyaluronic acid ester belonging to class (A).

48. (Withdrawn) The method according to claim 50 wherein said HA ester is the benzyl ester having a percentage of esterification ranging from 75 to 100%.

49. (Withdrawn) The method according to claim 48, wherein said benzylester has a percentage of esterification of 100% and is in the form of a non-woven tissue.

50. (Withdrawn) A surgical method for recovering or protecting a joint cartilage from a degenerative and/or inflammatory pathology, associated with the production of IL-1, selected from osteoarthritis, psoriatic and rheumatoid arthritis comprising

implanting into a subject in need thereof a graft essentially consisting of a biological material containing:

- a) a three-dimensional matrix based on a hyaluronic acid derivative and optionally
- b) chondrocytes and/or mesenchymal cells partially or completely differentiated towards chondrocytes.

51. (Currently amended) A surgical method for recovering or protecting a joint cartilage from a degenerative and/or inflammatory pathology, associated with the production of IL-1, selected from osteoarthritis, psoriatic and rheumatoid arthritis, said method comprising the step of implanting into a subject in need thereof a graft essentially consisting essentially of a biological material containing:

- a) a three-dimensional matrix based on a hyaluronic acid derivative in the form of a non-woven tissue and selected from the class of hyaluronic acid benzyl esters with alcohols of the aliphatic, araliphatic, cycloaliphatic, aromatic, cyclic and heterocyclic series, having a percentage of esterification ranging from 75 to 100%; and optionally
- b) chondrocytes and/or mesenchymal cells partially or completely differentiated towards chondrocytes.

52. (Currently amended) The method according to claim 51, wherein, ~~when the~~ biological material contains ~~the aforementioned cellular components~~ said cells (b), said graft is being an in vitro cartilage tissue to be surgically implanted in vivo inside the joint capsule ~~in which~~ wherein one of said degenerative pathologies has been established with consequent degradation of the extracellular cartilage matrix is degraded by said pathology.

53. (Currently amended) The method according to claim 52 51, wherein said graft ~~in vitro~~ cartilage tissue further comprises the extracellular matrix produced by ~~said b)~~ chondrocytes and/or mesenchymal cells partially or completely differentiated towards chondrocytes, said extracellular matrix being both within inside said graft ~~in-vitro~~

cartilage tissue and once ~~in vivo~~ implanted also inside the joint cartilage after the graft implantation affected by one of said degenerative pathologies.

54. (Currently amended) The method according to claim 51, wherein said graft is surgically implanted implantable at the beginning of the process of degradation of the molecules that make up the extracellular matrix of the cartilage.

55. (Currently amended) The method according to claim 51, wherein said graft is surgically implanted at implantable in the later stages of said pathology too, when moderately and/or badly damaged areas of cartilage can be seen.

56. (Previously presented) The method according to claim 51, wherein the average molecular weight of hyaluronic acid in the hyaluronic acid derivative range between  $1 \times 10^5$  Da and  $1 \times 10^6$  Da.

57. (Previously presented) The method according to claim 56, wherein the average molecular weight of hyaluronic acid range between 200,000 and 750,000 Da.

58. (Currently amended) The method according to claim 51, wherein the HA hyaluronic acid derivative has a percentage of esterification ranging from 75 50 to 100%, and the remaining percentage of unesterified HA hyaluronic acid is salfied with an organic or inorganic base.

59. (Previously presented) The method according to claim 58, wherein said base is sodium hydroxide.

60. – 62 (Cancelled)